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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Status of Claims:

Claims 8-23 are pending in this Office Action.

Claims 8, 9, and 23 are amended.

The objection to the abstract is withdrawn based on applicant's amendments.

The 35 U.S.C. 112, second paragraph rejection is withdrawn based on

applicant's amendment to claim 9.

Response to Arguments

1.   Applicant's arguments filed 10/15/2008 have been fully considered but they are

not persuasive. The reasons are set forth below.

Applicant's invention as claimed:

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 8, 10-11, 13, 15, and 20-23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Chiles et al. (U.S. 2001/0034759) in view of SGI (Techpubs Library

"IRIX Admin: Networking and Mail").

4.   **With respect to claim 8**, A method for interchanging data between an external

device (Chiles et al. Figure 4 "Host System 430") and applications installed on a plurality

of network elements (Chiles et al. [0011] "client device having computer software that

enables the client devices... to communicate with the host system") of a packet-

switching network (inherently implied by the use of TCP/IP protocol by the client device

[0060] in Chiles et al.) using a tunnel connection (Chiles et al. Abstract "communication

tunnel" and [0058] "Layer Two Tunneling Protocol"), wherein each network element is

connected to a network node device (Chiles et al. Abstract "The client devices are

typically connected to the home gateway device"), and wherein the network node device

is involved in the tunnel connection (Chiles et al. [0063] "The home gateway device

uses L2TP to tunnel the PPP traffic from each client PPPoE session to the host

system"), the method comprising:

        assigning to the network node device a globally unique address (Chiles et

    al. [0087] Lines 17-21 and [0088] Lines 6-8 "IP address" from the host system) so

    that the network node device forms a network-end terminal point of the tunnel

    connection when a plurality of network elements jointly use the tunnel

    connection, wherein all data are routed through the network node device (Chiles

    [0070] Lines 13-16 and [0063] Lines 4-10) and wherein the network node device

    is a terminal point of the tunnel connection (a NAT enabled router of Chiles is

    known in the art to be a terminal point of the tunnel connection in the views of the

    external networks).

If the network element requires a global address for executing an application, the

Chiles reference discloses how the network element is assigned a global address

(Chiles et al. [0096] Lines 12-16). However, where the Chiles reference does not teach,

the SGI reference teaches a method of assigning to a network element a globally

unique address so that the network element forms a network-end terminal point of the

tunnel connection when the network element requires a global address for executing an

application, and when the tunnel connection is exclusively used by the network element

(See SGI "Setting Up Tunnels to Support Multicast Packets" and Figure 3-2), and

wherein the network node device is a data-routing entity of the tunnel connection (See

SGI Figure 3-2 "Router 1" and "Router 2").

It would have been obvious to the person having ordinary skill in the art, at the

time the invention was made, to have combined the teachings of SGI reference together

in a device taught by Chiles reference in order to be able to support Legacy network

hardware systems as well as newer network devices.

5.   **With respect to claim 10**, the Chiles and SGI references teach the limitations of

claim 8 in which claim 10 is depending upon as noted above. The Chiles reference

further teaches, the network elements are computers (Chiles et al. Figure 4 "Window

PC" 405a) and the external device (Chiles et al. Figure 4 "Host System" 430) is an

Internet service provider (Chiles et al. [0007] Lines 5-6) connected by a DSL modem

(Chiles et al. Figure 4 "xDSL Modem" 420d).

6.   **With respect to claim 11**, the Chiles reference further teaches the computers as

claimed in claim 10 are Personal Computers (Chiles et al. Figure 4 "Windows PC"

405a).

7.   **With respect to claim 13**, in addition to limitations of claim 8, in which claim 13

is depending upon, which are taught by the Chiles and SGI references, the Chiles

reference teaches the network elements have associated local addresses which are

unique only in the packet-switching network (Chiles [0085] Lines 1-3 and [0086] Lines 1-

4).

8.   **With respect to claim 15**, the Chiles and SGI references teach limitations as

claimed in claim 10, in which claim 15 depends on. In addition, the Chiles reference

further teaches the network elements have associated local addresses which are

unique only in the packet-switching network (Chiles Figure 12 "LAN Address", [0085]

Lines 1-3, and [0086] Lines 1-4).

9.   **With respect to claims 20 and 21**, the combination of Chiles and SGI

disclosures teach the network node device that is a terminal point or a data-routing

entity of the tunnel connection as noted above. Therefore, it is inherent the device

resulted from this combination is capable of performing as "a terminal point" or "a data-

routing entity" of the tunnel connection either "alternately" or "simultaneously."

10.   **With respect to claims 22**, the combination of Chiles and SGI teachings

obviously implies that the network node device is a terminal point or a data-routing

entity of a plurality of tunnel connections: tunnel connections that terminate at the

network node device as taught by the Chiles reference and tunnel connections that

terminate at the network elements as taught by the SGI reference.

11.   **With respect to claim 23**, the Chiles reference discloses a network node device

(Chiles et al. Figure 4 "Home Gateway Device" 415) involved in interchanging data

using at least one terminal connection (Chiles et al. Abstract "communication tunnel"

Lines 11-14) between an external device (Chiles et al. Figure 4 "Host System" 430) and

applications installed on a plurality of network elements (Chiles et al. [0011] Lines 1-5)

of a packet-switching network (inherently implied by the used of TCP/IP [0060] in Chiles

reference), wherein

        each network element is connected to a network node device (Chiles et al.

Figure 4 client devices 405), wherein

        a network-end terminal point of the tunnel connection has a uniquely

allocated global address (Chiles et al. [0089] Lines 1-4, [0087] Lines 17-21, and

[0088] Lines 5-7), wherein

        the network node device forms the network-end terminal point of the

tunnel connection (Chiles et al. [0096] Lines 14-16) if a plurality of network

elements jointly use the terminal connection (Chiles et al. [0063] Lines 4-10).

        If a network element requires a global address for executing an

application, Chiles reference does not disclose of the network element forms the

network-end terminal point of the tunnel connection when the tunnel connection

is exclusively used by the network element, and all data are routed through the

network node device. Rather, Chiles teaches the network element that sets up

sessions to communicate through the tunnel connection an all data are routed through the network node device (Chiles et al. [0089]).

However, the SGI document discloses the network element that forms the network-end terminal point of the tunnel connection, wherein the tunnel connection is configured to be exclusively used by the network element (SGI "Setting Up Tunnels to Support Multicast Packets" and Figure 3-2).

For the same reason as noted above, it would have been obvious to the person having ordinary skill in the art, at the time the invention was made, to have combined the teachings of SGI reference together in a device taught by Chiles reference in order to be able to support Legacy network hardware systems as well as newer network device.

12.   Claims 9, 12, 14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiles et al. (U.S. 2001/0034759) in view of SGI (Techpubs Library "IRIX Admin: Networking and Mail"), further in view of Microsoft TechNet ("Microsoft Privacy Protected Network Access: Virtual Private Networking and Intranet Security").

13.   **Regarding claim 9**, the Chiles and SGI references teach the limitations of claim 8, in which claim 9 is depending upon. In particular, the Chiles reference teaches the tunnel connection is a connection which operates on the basis of the L2TP tunneling protocol which transmits the data in a tunneled connection (Chiles et al. [0063] Lines 4-10), instead of a PPTP tunneling protocol as cited in claim 9. However the Microsoft document discloses of L2TP tunneling protocol as a combination of PPTP and L2F protocols (Microsoft Page 2 "Layer 2 Tunneling Protocol (L2TP)"). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to have

substituted PPTP protocol in place of L2TP protocol in order to provide backward

compatibility for older network elements since PPTP was first delivered in 1996, 2 years

before the availability of L2TP (See Microsoft "PPTP Design Goals and Overview" page

3). Furthermore, Microsoft reference teaches that PPTP tunneling protocol is simple

and inexpensive to set up, and thus will continue to be a preferred choice for a certain

group of customers (See Microsoft "PPTP" page 5-6)

14.   **Regarding claim 12**, the Chiles, SGI, and Microsoft references teach all the

limitations of claim 9 in which claim 12 depends on. Furthermore, the Chiles reference

teaches the network elements are computers (Chiles et al. Figure 4 "Window PC" 405a)

and the external device (Chiles et al. Figure 4 "Host System" 430) is an Internet service

provider (Chiles et al. [0007] Lines 5-6) connected by a DSL modem (Chiles et al.

Figure 4 "xDSL Modem" 420d).

15.   **Regarding claim 14**, the Chiles, SGI, and Microsoft references teach all the

limitations of claim 9 in which claim 14 depends on. In addition, the Chiles reference

teaches the network elements have associated local addresses which are unique only

in the packet-switching network (Chiles Figure 12 "LAN Address", [0085] Lines 1-3, and

[0086] Lines 1-4).

16.   **Regarding claim 17**, the Chiles, SGI, and Microsoft references teach all the

limitations of claim 9 in which claim 17 depends on. In addition, the Chiles reference

teaches the network node device is a router (Chiles et al. "Home Gateway Device")

which has an entity for setting up and operating a tunnel connection (Chiles et al. Figure

13 "L2TP Concentrator" 1319). However, the Chiles reference uses L2TP tunnel

connection instead of PPTP tunnel connection as used by the claimed invention. For

the same reasons taught by the Microsoft document as noted above, it would have

been obvious to one of ordinary skill in the art at the time of the invention to set up a

PPTP tunnel connection using the PPTP tunneling protocol instead of L2TP tunneling

protocol.

17.   **Regarding claim 18**, the Chiles, SGI, and Microsoft references teach all the

limitations of claim 10, in which claim 18 depends on. Furthermore, the Chiles

reference teaches the network node device is a router which has an entity for setting up

and operating a tunnel connection (Chiles et al. "Home Gateway Device" functions as a

router and Figure 13 "L2TP Concentrator" 1319). However, the Chiles reference uses

L2TP protocol instead of PPTP protocol. For the same reasons taught by the Microsoft

document as noted above, it would have been obvious to one of ordinary skill in the art

at the time of the invention to set up a PPTP tunnel connection using the PPTP

tunneling protocol instead of L2TP tunneling protocol.

18.   **Regarding claims 16 and 19**, the Chiles, SGI, and Microsoft references teach

all the limitations of claims 8 and 13 in which claims 16 and 19 depend on, respectively.

Furthermore, the Chiles reference teaches the network node device is a router which

has an entity for setting up and operating a tunnel connection (Chiles et al. "Home

Gateway Device" functions as a router and Figure 13 "L2TP Concentrator" 1319).

However, the Chiles reference uses L2TP protocol instead of PPTP protocol. For the

same reasons taught by the Microsoft reference as noted above, it would have been

obvious to one of ordinary skill in the art at the time of the invention to set up a PPTP

tunnel connection using the PPTP tunneling protocol instead of L2TP tunneling protocol.

REMARKS

Applicant has amended claims 9 to overcome 35 U.S.C. 112, second paragraph

rejection. Furthermore, applicant has amended and argued claims 8 and 23.

The Applicant Argues:

Regarding claim 8, the Chiles reference teaches the first configuration of

applicant's invention while the SGI reference teaches the second configuration of the

same invention and that one skilled in the art would not combine the teachings of Chiles

and SGI references.

Further, regarding claim 8, the SGI reference does not teach "a method of...and

forming the network-end terminal point of the tunnel connection by a network element..."

and "the tunnel connection is exclusively used by the network element..."

Regarding claim 23, it would not be obvious to reconstruct the claimed invention

from the separate teachings of Chiles and SGI references.

In response,

The examiner has carefully considered the arguments above but maintains the

rejections because the references teach the limitations as claimed.

In response to applicant's argument that there is no suggestion to combine the

references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is known in the art at the time of the invention that there exist widely used, before 1990, systems called Legacy network systems, which required own addresses and direct tunneling. The Legacy systems were in used at the time of the invention and are still in used today because some companies try to avoid the cost of replacing them. Therefore, it would have been obvious to one skilled in the art to have included the option of allowing a direct tunneling between the network elements and the external device verses having a tunnel that stops at the network node device, in order to provide support for older network elements that use Legacy protocols.

Regarding certain limitations of claim 8, the SGI reference teaches "a method of...and forming the network-end terminal point of the tunnel connection by a network element..." (SGI figure 3-2). The "Host" in "Net A" is a workstation running IRIX which can be configured as the endpoint of a tunnel as stated in SGI reference and therefore reads on the limitation of claim 8. Similarly, "Host" in "Net C" is also another endpoint of the tunnel.

Additionally, SGI reference teaches "the tunnel connection is exclusively used by the network element". SGI reference teaches tunnels between workstations in networks and by definition of tunnel connection, the tunnel is exclusively used by the two parties

at each end of the tunnel. It would have been obvious to one of ordinary skill in the art

at the time of the invention to have understood that the tunnel in SGI reference (figure

3-2) is exclusively used by the two Hosts in Net A and Net C.

Conclusion

19.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to YOUPAPORN NILANONT whose telephone number is

(571) 270-5655. The examiner can normally be reached on Monday through Thursday

and alternate Friday at 7:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. N./
12/16/2008
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446